IN THE CLAIMS

The current claims follow. For claims not marked as amended in this response, any difference in the claims below and the previous state of the claims is unintentional and in the nature of a typographical error.

1. (Currently Amended) An apparatus providing equipment and facility redundancy, comprising:

working circuitry configured to receive and process a first stream of communication data;

protection circuitry configured to receive and process a second stream of communication data, the second stream being identical to the first stream, the protection circuitry and the working circuitry being functionally identical and synchronized to each other;

an NxN switch fabric having N input ports and N output ports, wherein each of the N input ports may be connected to any one of the N output ports; and

a first cross point switch having N input ports and N output ports capable of receiving the processed first stream and the processed second stream, wherein the first cross point switch couples the processed first stream to a first input port of the NxN switch fabric in a first configuration and couples the processed second stream to the first input port in place of the processed first stream in a second configuration upon detection of an error condition in at least one of the working circuitry and the first stream of communication data;

wherein the working circuitry includes a plurality of first ATM channels performing ATM

functions on the first stream;

wherein the protection circuitry includes a plurality of second ATM channels performing the ATM functions on the second stream; and

wherein one of the first ATM channels and one of the second ATM channels includes a SONET framer.

2. (Original) The apparatus of claim 1, wherein the communication data is ATM cells data.

3. (Original) The apparatus of claim 1, wherein the working circuitry receives the first stream from an optical signal and the protection circuitry receives the second stream from the optical signal.

4. (Original) The apparatus of claim 1, wherein the working circuitry is implemented on a first circuit board and the protection circuitry is implemented on a second circuit board, the first circuit board being separate and distinct from the second circuit board.

5. (Cancelled).

6. (Currently Amended) The apparatus of claim 5 1, wherein one of the first ATM channels and one of the second ATM channels each includes a multiplexer.

7. (Cancelled).

8. (Currently Amended) The apparatus of claim 5 1, wherein one of the first ATM channels and one of the second ATM channels includes a router.

9. (Currently Amended) The apparatus of claim 5 1, wherein one of the first ATM channels and one of the second ATM channels includes a user parameter control unit.

10. (Original) The apparatus of claim 1, further comprising:

a first module including the working circuitry accepts the first stream as input to the working circuitry.

11. (Original) The apparatus of claim 1, further comprising:

a second module including the protection circuitry and having a plurality of ports wherein one of the ports accepts the second stream as input into the protection circuitry.

12. (Cancelled).

13. (Cancelled).

14. (Previously Presented) The apparatus of claim 1, further comprising a second cross point switch having N input ports and N output ports capable of receiving the processed first stream or the processed second stream from a first output port of the NxN switch fabric, wherein the second cross point switch couples the first output port of the NxN switch fabric to at least one of an output portion of a second working circuitry and an output portion of a second protection circuitry.

15. (Original) The apparatus of claim 1, wherein the error condition is a facility error condition.

16. (Original) The apparatus of claim 15, wherein the facility error condition includes a disconnected cable.

17. (Original) The apparatus of claim 1, wherein the error condition is an equipment error condition.

18. (Original) The apparatus of claim 17, wherein the equipment error condition includes at least one of a failure of a SONET Framer a failure of a multiplexer, a failure of a parameter control unit, and a failure of a router.

19. (Currently Amended) A method providing equipment and facility redundancy for ATM circuitry which carriers out ATM functions, comprising:

performing a group of ATM functions with first circuitry on a first stream of ATM cells producing a processed first stream;

performing the ATM functions with second circuitry on a second stream of ATM cells producing a processed second stream, the second stream being identical to the first stream, the first circuitry and the second circuitry implementing the ATM functions, the first circuitry and the second circuitry being synchronized to each other; and

in a cross point switch having N input ports capable of receiving the first processed stream and the second processed stream and N output ports coupled to N input ports of an NxN switch fabric, coupling the first processed stream to a first input port of the NxN switch fabric in a first configuration and coupling the second processed stream to the first input port of the NxN switch fabric in place of the first processed stream in a second configuration upon detection of an error condition in the first circuitry, thereby providing redundancy protection for the ATM functions;

wherein the ATM functions include at least one of the multiplexing, SONET framing, routing, and user parameter control.

20. (Cancelled).

21. (Cancelled).

22. (Cancelled).

23. (Currently Amended) A redundant telecommunication switch comprising:

a primary input interface comprising N communication paths capable of receiving N input data streams and outputting N processed data streams;

a secondary input interface comprising N communication paths capable of receiving copies of said N input data streams and outputting N copy data streams corresponding to the N processed data streams output from the primary input interface, wherein the secondary input interface is functionally identical to the primary input interface;

a switch fabric having 2N input ports and 2N output ports, wherein each of the 2N input ports may be connected to each one of the 2N output ports; and

a first cross point switch having first N input ports capable of receiving the N processed data streams from the primary input interface and second N input ports capable of receiving the N copy data streams from the secondary input interface, wherein the first cross point switch couples the N processed data streams from the primary input interface to N inputs ports of the switch fabric in a first configuration, and wherein the first cross point switch is capable of detecting an error in a first processed data stream output from the primary input interface and, in response to the detection, switching a corresponding first copy data stream to a first input port of the switch fabric in place of the first processed data stream in which the error was detected;

wherein the primary input interface includes a plurality of first ATM channels performing ATM functions on the input data streams and the secondary input interface includes a plurality of second ATM channels performing the ATM functions on the copies of the input data streams; and

wherein one of the first ATM channels and one of the second ATM channels includes a SONET framer.